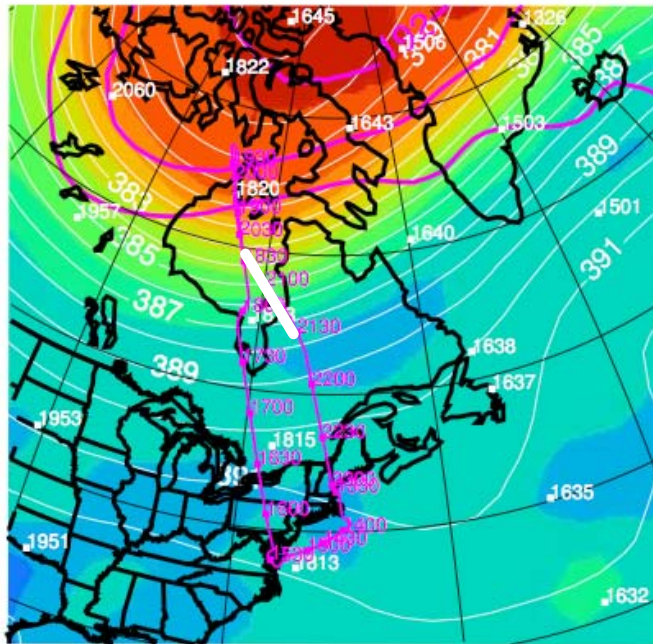


Coincident Measurements between the NCAR Fourier Transform Spectrometer in PAVE and MLS on Aura

Michael Coffey and James Hannigan

November 2005

18 UTC on 29 January, 2005 at 450.0 K



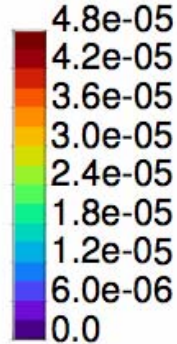
MNST (x 1.00E+03 J/kg⁻¹)

192, 196, 200 (K)

NMC, Grid: GG2%5X2%5

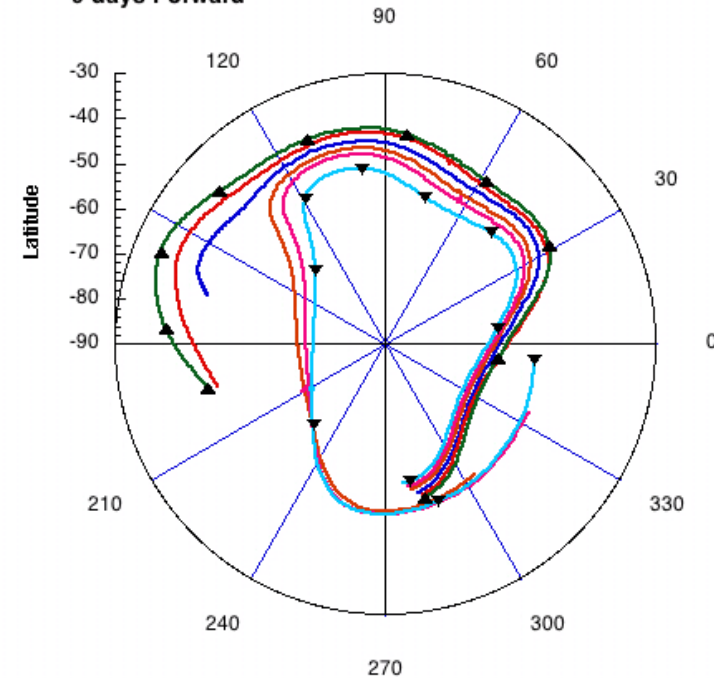
Seq: E01, Spec: SMRF62

EPV (K m²/kg s)



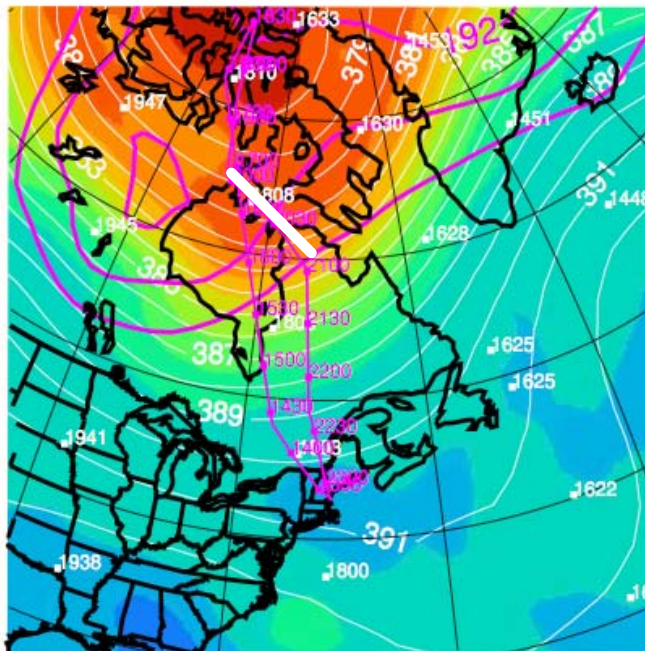
Plots from NASA Ames Airborne Science
Meteorological Support

Trajectory
From 20050129
9 days Forward



Trajectories from model
of Schoeberl, Lait and Newman

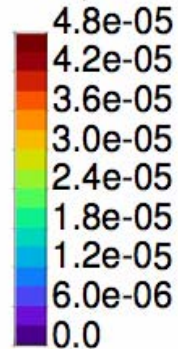
18 UTC on 31 January, 2005 at 450.0 K



NMC, Grid: GG2%5X2%5

Seq: E01, Spec: SMRF62

EPV ($\text{K m}^2/\text{kg s}$)

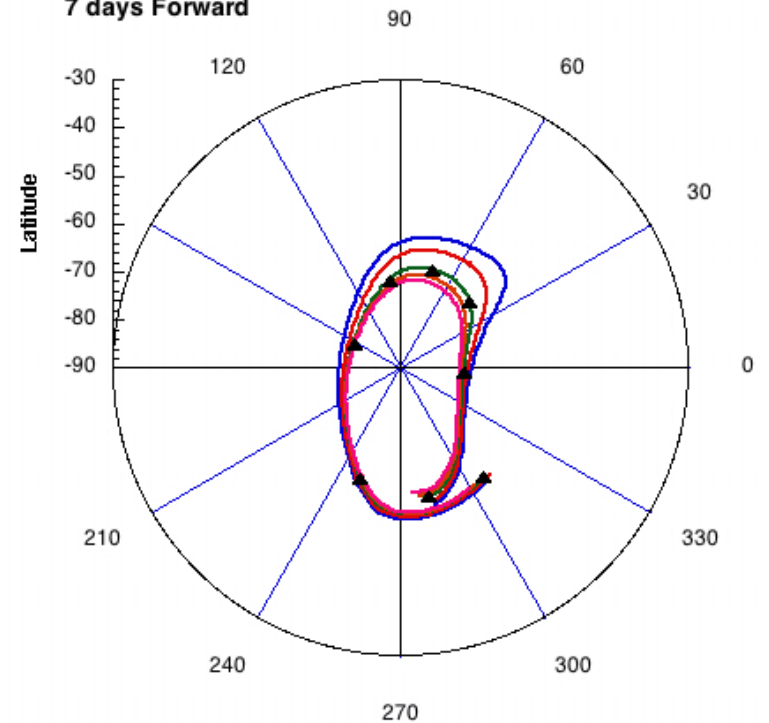


INST ($\times 1.00\text{E}+03 \text{ J/kg}^{-1}$)

192, 196, 200 (K)

Plots from NASA Ames Airborne
Science Meteorological Support

Trajectory
From 20050131
7 days Forward



Trajectories from model
of Schoeberl, Lait and Newman

Polar vortex as a validation target:

Localized feature, but big enough to find

Known structure

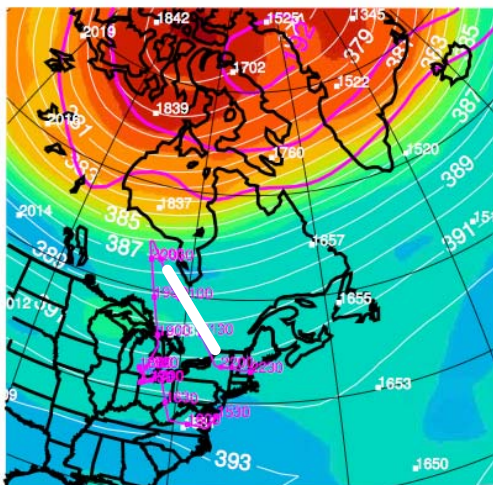
Predictable

Both hemispheres

Some gases increase, some decrease

Sharp boundary

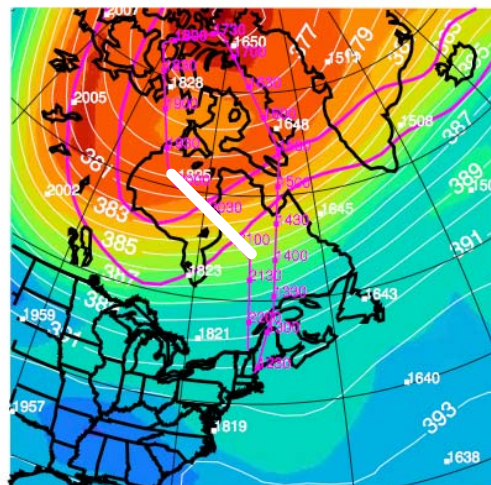
18 UTC on 3 February, 2005 at 45°N



MNST (x 1.00E+03 J/kg⁻¹)

192, 196, 200 (K)

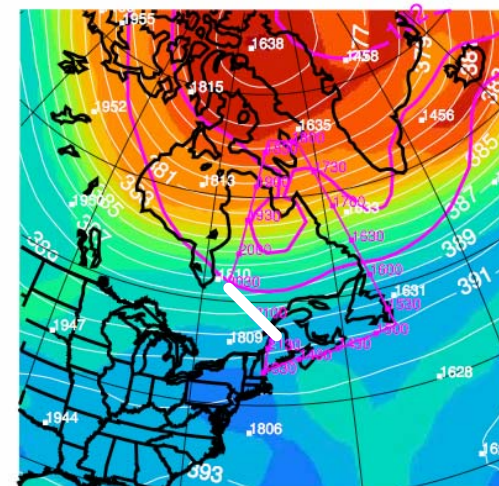
18 UTC on 5 February, 2005 at 45°N



MNST (x 1.00E+03 J/kg⁻¹)

192, 196, 200 (K)

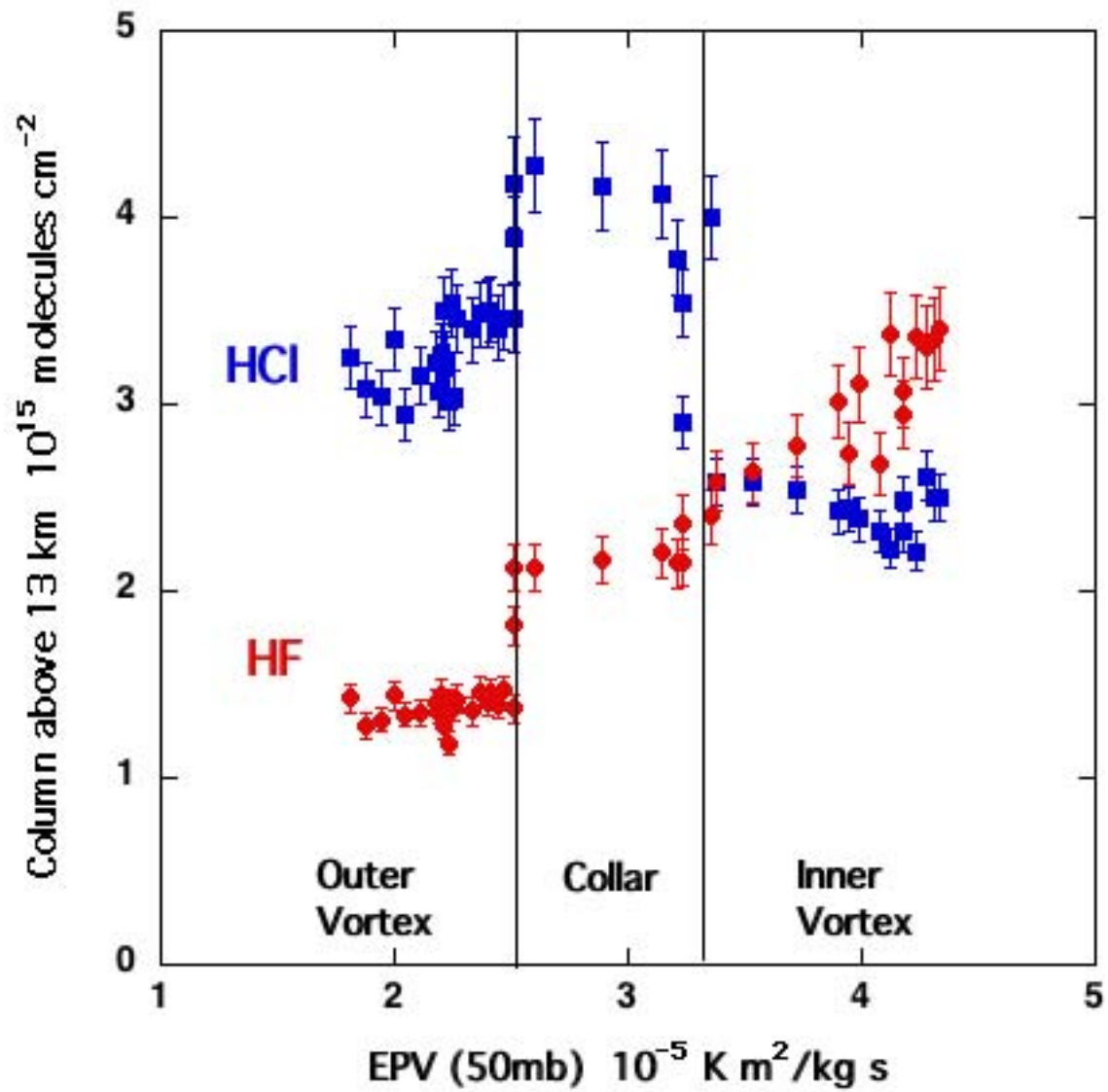
18 UTC on 7 February, 2005 at 45°N



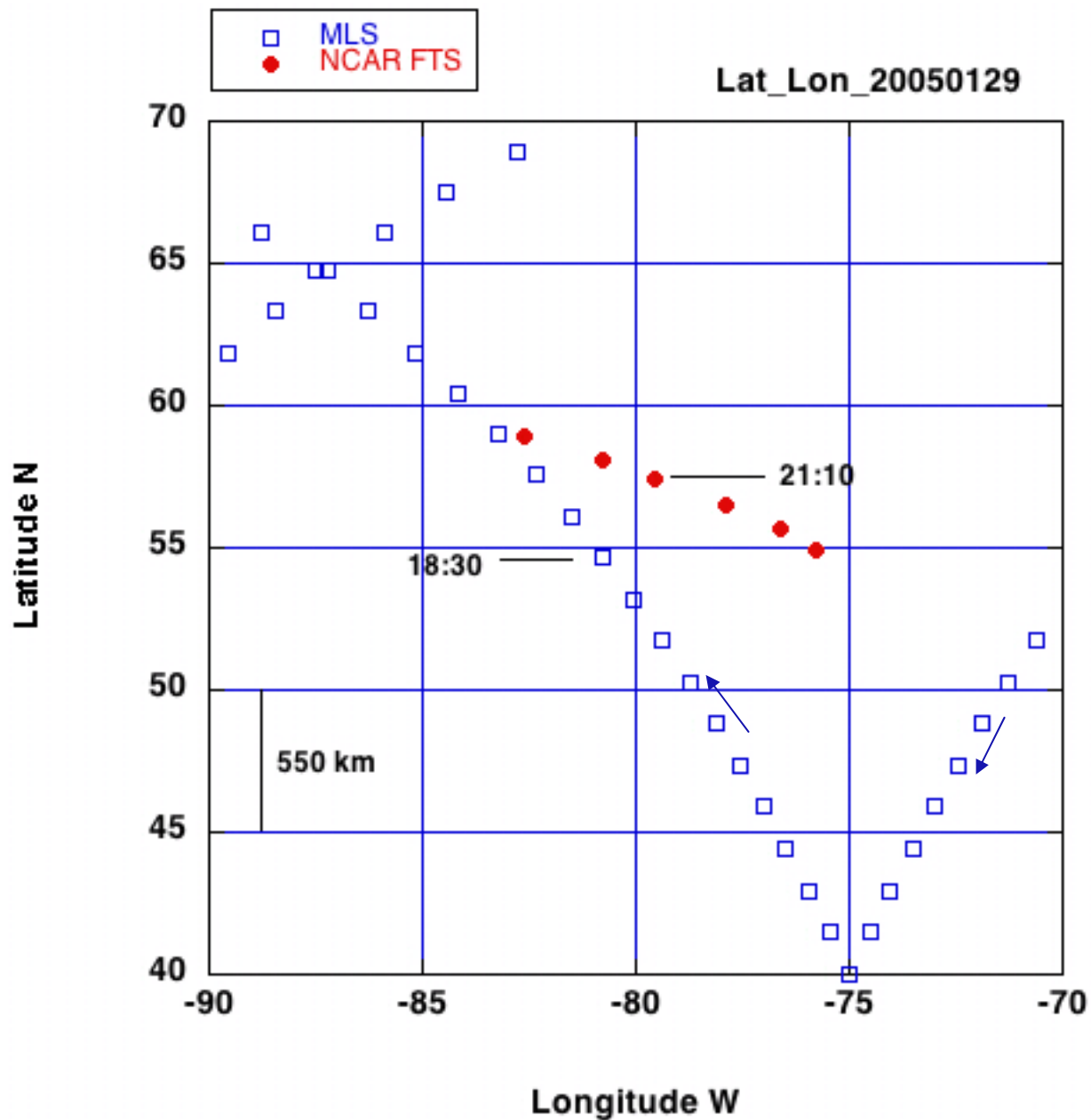
MNST (x 1.00E+03 J/kg⁻¹)

192, 196, 200 (K)

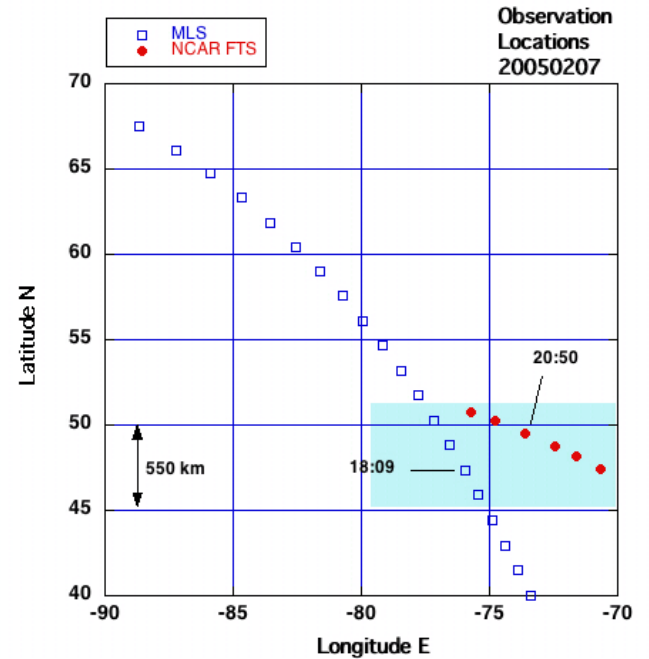
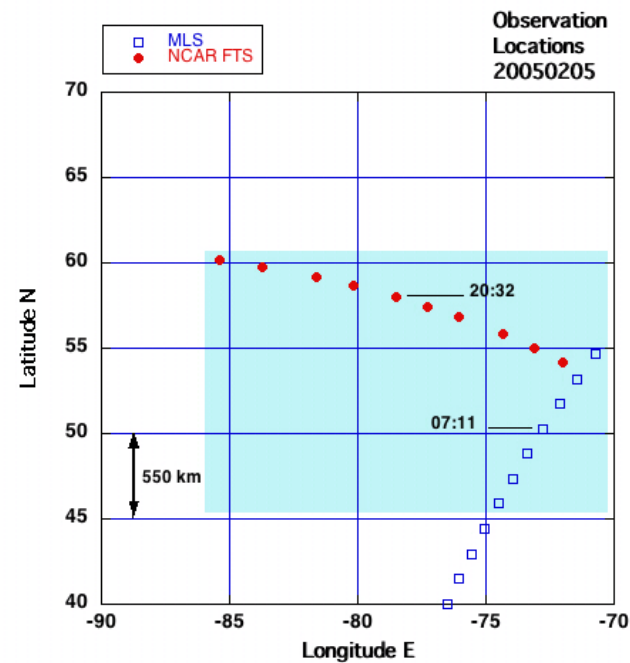
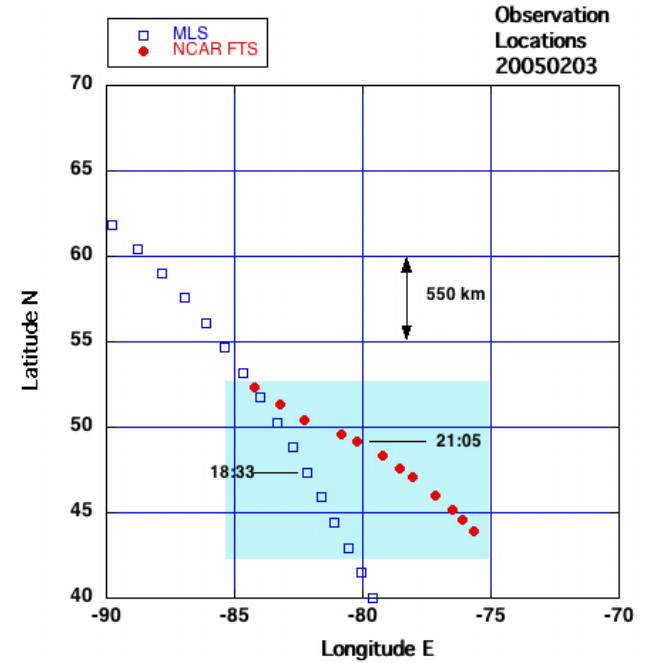
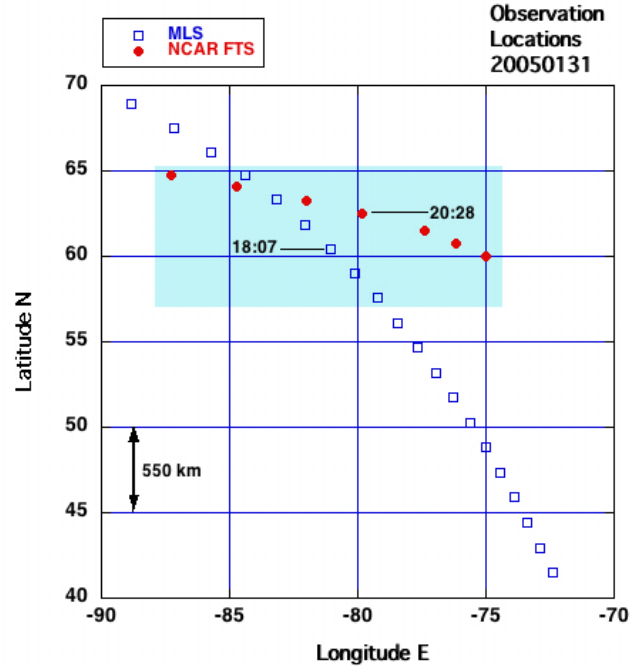
Plots from NASA Ames Airborne Science Meteorological Support

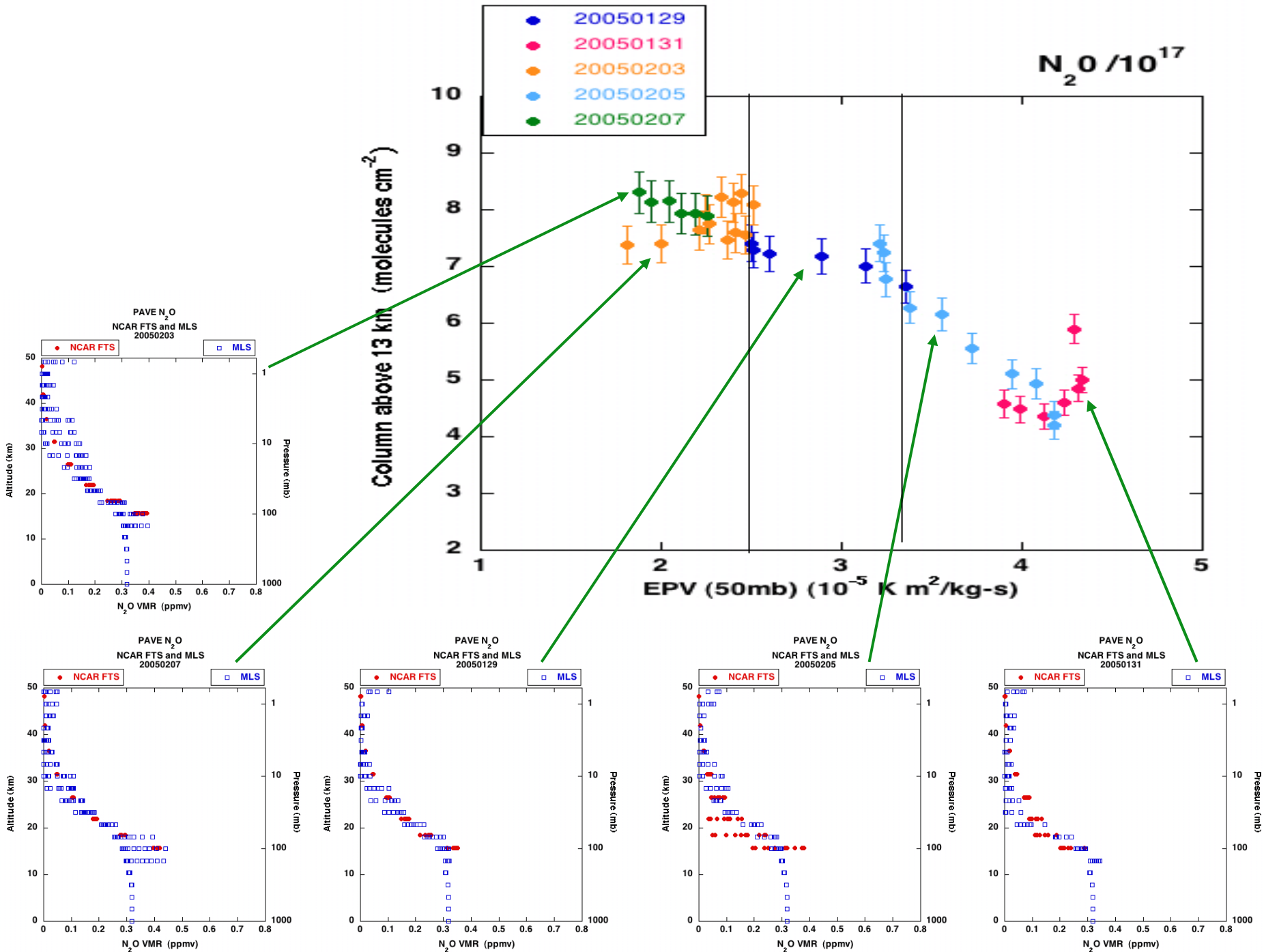


EPV (50mb) from GSFC XSxxxx data files

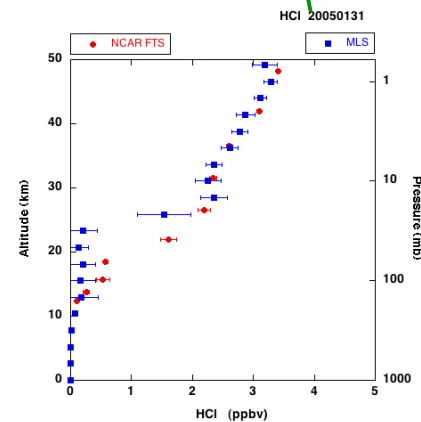
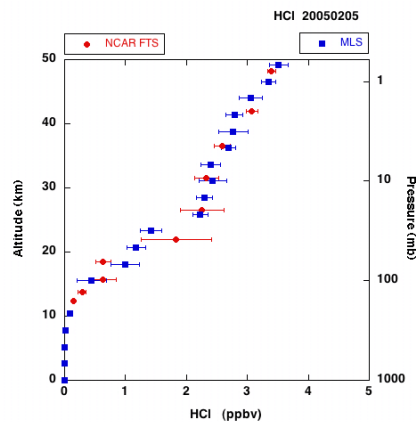
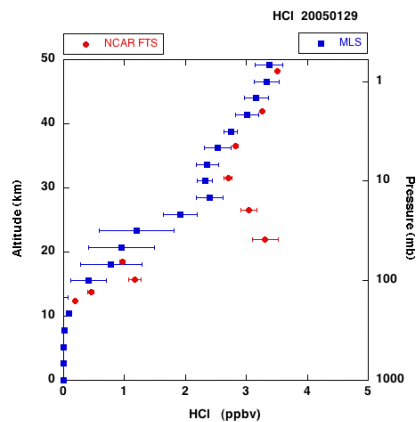
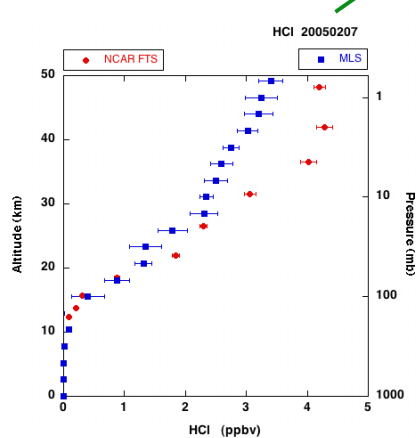
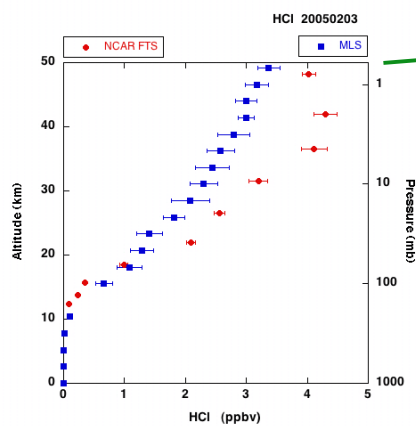


Aura sub-satellite
track and DC-8
location for
NCAR FTS
observations

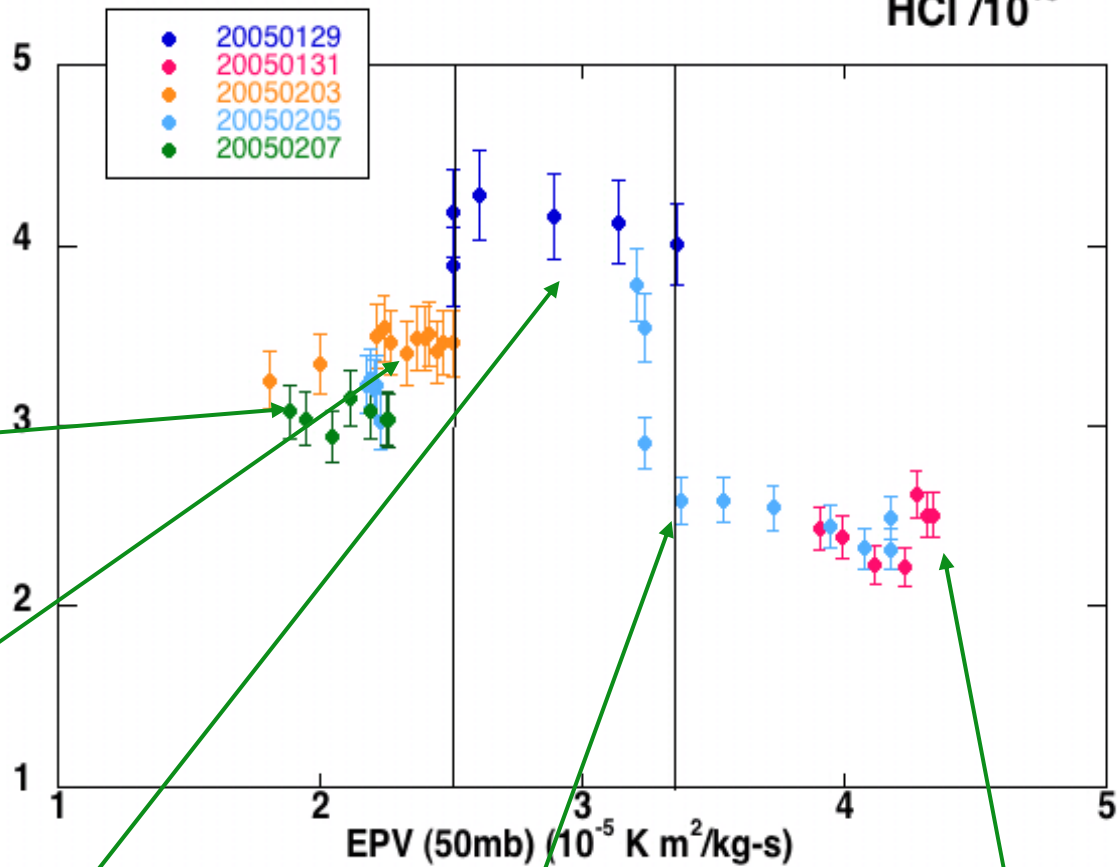




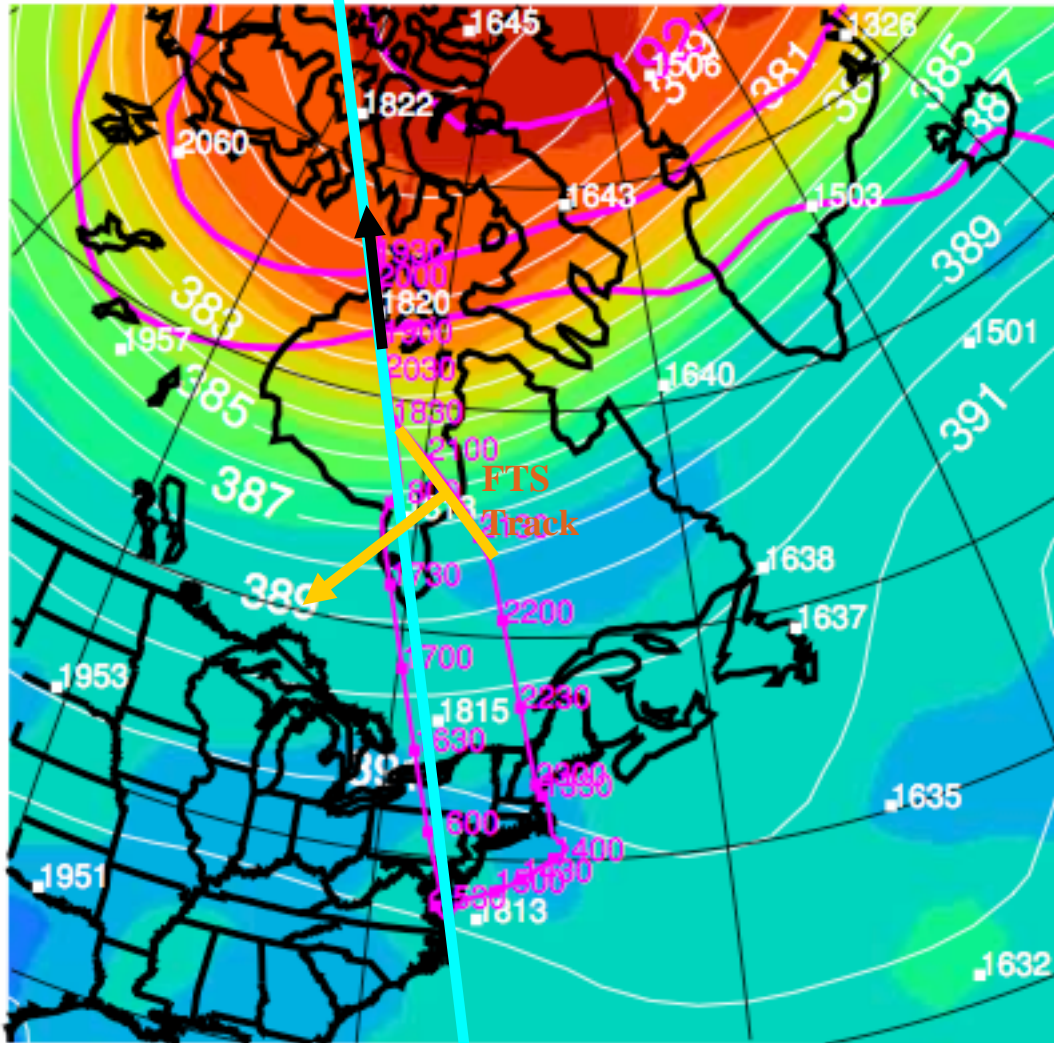
HCl / 10¹⁵



Column above 13 km (molecules cm⁻²)



18 UTC on 29 January, 2005



MLS track and
view direction

FTS track and
view direction

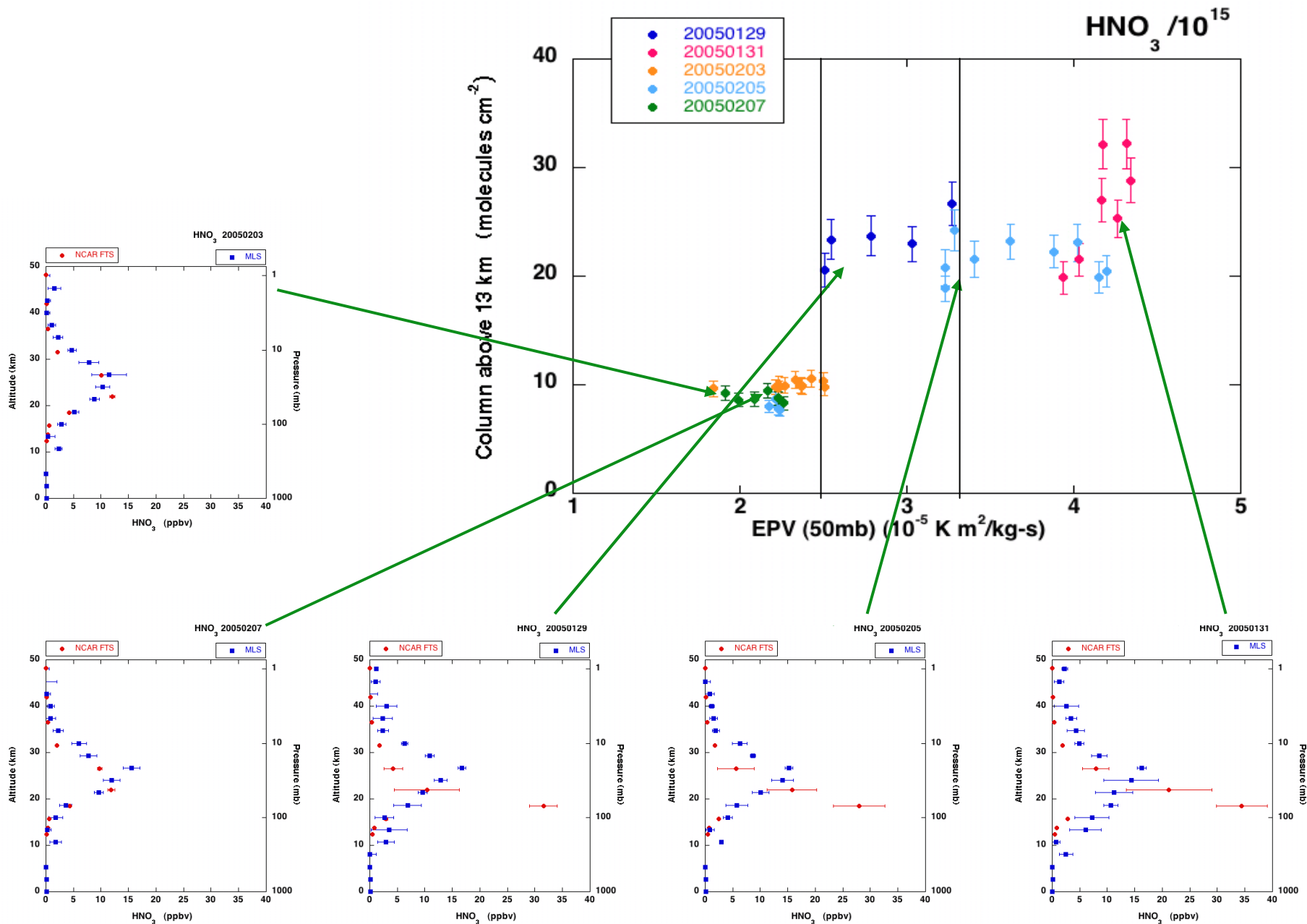
MNST ($\times 1.00\text{E}+03 \text{ J/kg}^{-1}$)

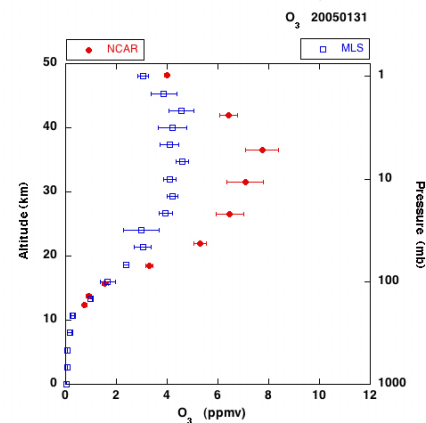
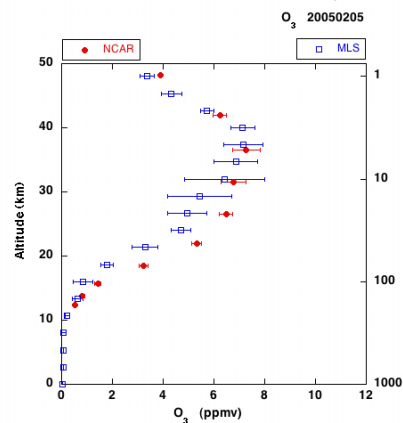
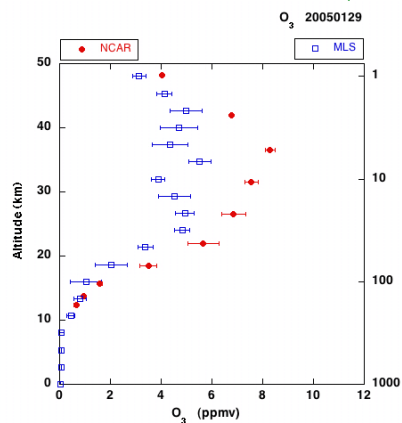
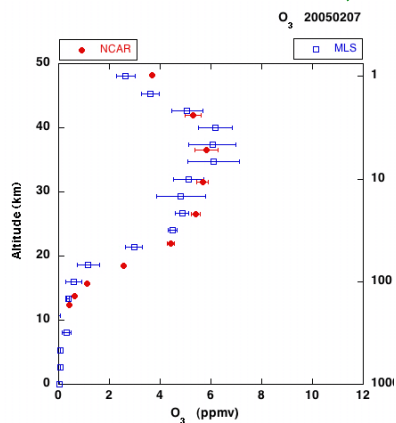
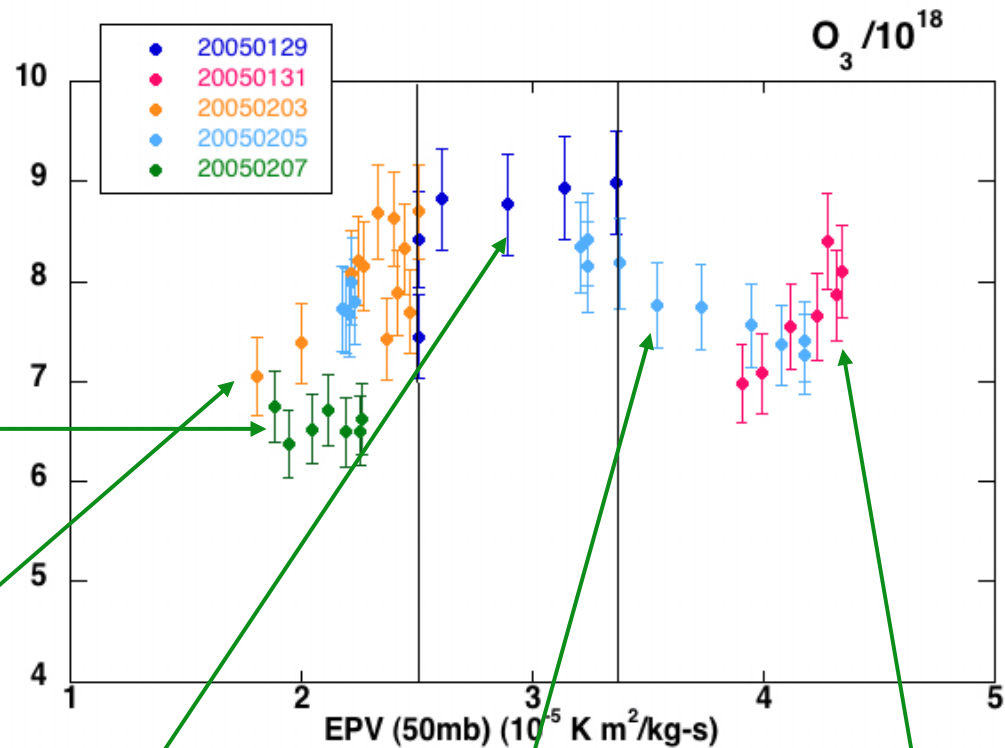
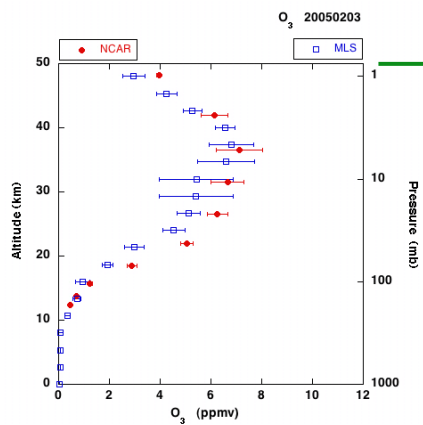
MLS Track

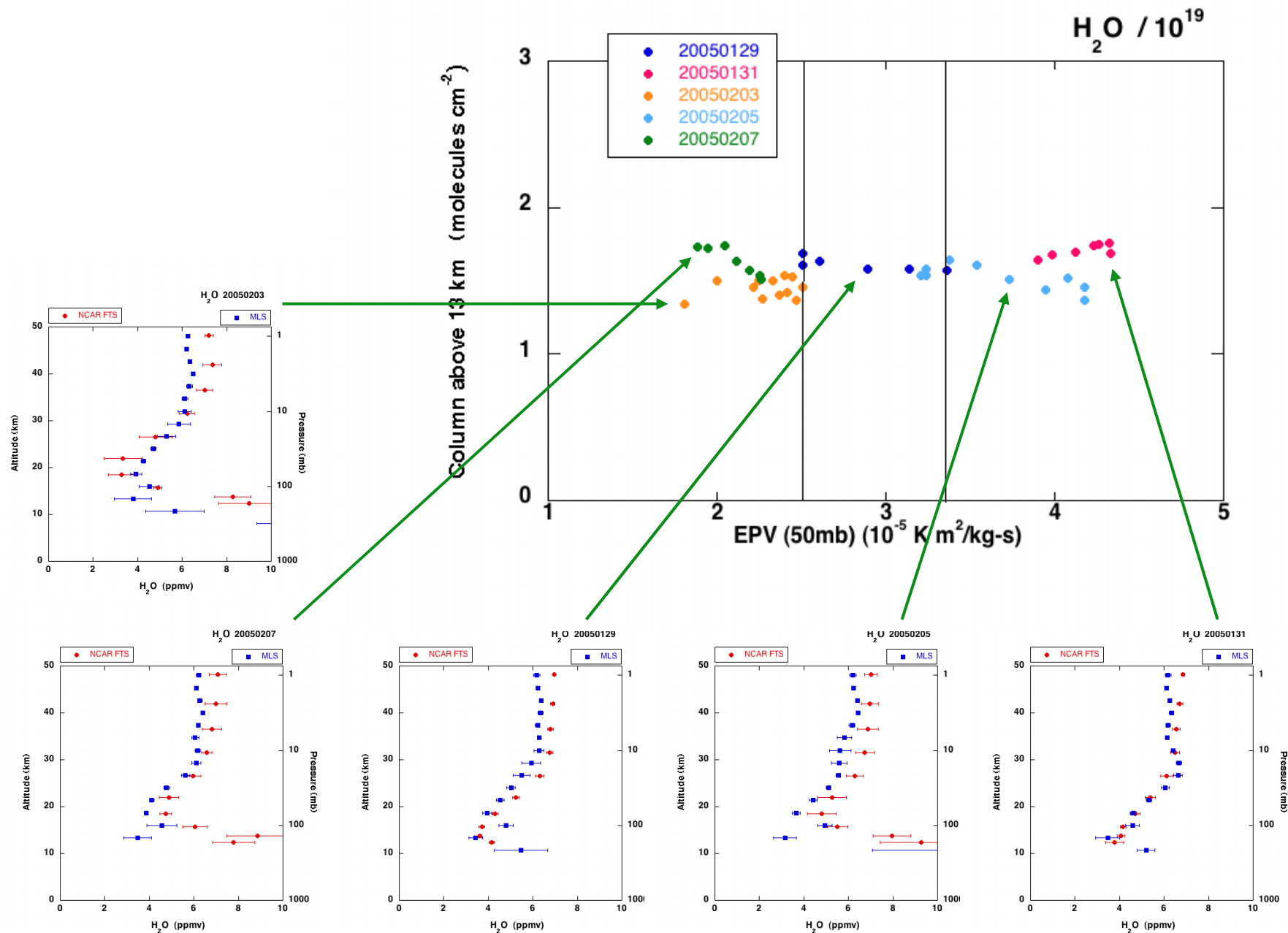
192, 196, 200 (K)



QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.







Still to do :

MLS CO HCN

OMI O₃ NO₂

HIRDLS O₃ H₂O CH₄ N₂O
 HNO₃ CCl₃F CF₂Cl₂
 ClONO₂

TES any limb results
 from this period